

### **IN THE CLAIMS**

This listing of the claims will replace all prior listings.

#### **Listing of Claims:**

1. (Currently Amended) A magnetic recording head for a helical scan type magnetic recording/reproducing apparatus comprising:  
a multi-gap recording head formed by laminating "n" recording heads and having "n" recording gaps, said "n" being an integer greater than 2,  
wherein[[:]];  
said gaps are pitched so as to record a pattern of tracks adjacent to one another; and  
a gap for recording the last track among "n" recording gaps of said multi-gap recording head ~~has-a~~ being wider gap than other gaps.
  
2. (Currently Amended) A rotary drum unit for a helical scan type magnetic recording/reproducing apparatus ~~provided with~~ comprising:  
a recording head [[:]];  
a reproducing head[[:]]; and  
~~means a unit~~ for transmitting recording and reproduced signals,  
wherein[[:]];  
said recording head [[:]] comprises a multi-gap recording head formed by laminating "n" recording heads and having "n" recording gaps,  
said gaps are pitched so as to record a pattern of tracks adjacent to one another,  
said "n" being an integer greater than 2, and  
a gap for recording the last track among "n" recording gaps of said multi-gap recording head ~~has-a~~ being wider gap than other gaps.
  
3. (Currently Amended) The rotary drum unit according to claim 2, ~~wherein~~ further comprising:  
two multi-gap reproducing heads, each formed by laminating "n" reproducing heads and having "n" reproducing gaps, are arranged at an angle of 180° to each other.

4. (Currently Amended) The rotary drum unit according to claim 2, wherein:  
[[a]] the multi-gap reproducing head is formed by laminating "n" recording heads,  
having has "2n" reproducing gaps, and is arranged at an angle of 180° to said multi-gap  
recording head.

5. (Currently Amended) A rotary drum unit capable of recording "n" tracks per rotation,  
wherein comprising:  
two multi-gap reproducing heads each formed by laminating "n" reproducing heads, and  
having (n + m) reproducing gaps are mounted,  
wherein,  
said n being an integer greater than 2 and m being an integer greater than or equal to 1,  
respectively.

6. (Currently Amended) A rotary drum unit capable of recording "n" tracks per rotation,  
wherein comprising:  
a multi-gap reproducing head formed by laminating (2n+m) reproducing heads, and  
having (2n + m) reproducing gaps is mounted,  
wherein,  
said n being an integer greater than 2 and m being an integer greater than or equal to 1.

7. (Currently Amended) A magnetic recording method for a helical scan type  
magnetic recording/reproducing apparatus, wherein said apparatus includes a multi-gap  
recording head formed by laminating "n" recording heads and having "n" recording gaps, said  
"n" being an integer greater than 2, and said gaps are pitched so as to record a pattern of tracks  
adjacent to one another; and a gap for recording the last one of said tracks among "n" gaps of  
multi-gap recording head has a being a wider gap recording gap than other gaps, wherein said  
method comprising the step of:

recording said tracks by determining a tape running speed such that a minimum recorded  
track width can be ensured when said multi-gap recording head overwrites after one rotation of  
recording completed by said gap.

8. (Currently Amended) A magnetic recording/reproducing method according to claim 7, further comprising the step of:

~~in which reproducing signals recorded by in the recording step magnetic recording method according to claim 7 are reproduced~~ by a multi-gap reproducing head formed by laminating multiple reproducing heads and having a head width which is 1/2 of a track width or less,

wherein:

two multi-gap reproducing heads each having “n” gaps are arranged at an angle of 180° to each other on a rotary drum as said multi-gap reproducing head~~[[;]]~~ and

said two multi-gap reproducing heads are switched on said rotary drum to transmit reproduced signals therefrom via a rotary transformer having “n” recording channels and “n” reproducing channels.

9. (Currently Amended) A magnetic recording/reproducing method according to claim 7, further comprising the step of:

~~in which reproducing signals recorded by the recording step magnetic recording method according to claim 7 are reproduced~~ by a multi-gap reproducing head formed by laminating multiple reproducing heads and having a head width which is 1/2 of a track width or less,

wherein:

a multi-gap reproducing head having “2n” gaps is arranged at an angle of 180° to said multi-gap recording head on a rotary drum as said multi-gap reproducing head; and

said n-channel multi-gap recording head and said multi-gap reproducing head are switched on said rotary drum to transmit reproduced signals from said multi-gap reproducing head via a rotary transformer having “n” recording channels and “n” reproducing channels.

10. (Currently Amended) A magnetic recording/reproducing method ~~for reproducing signals recorded by the magnetic recording method~~ according to claim 7, wherein further comprising the step of:

~~reproducing~~ said signals ~~are reproduced~~ recorded by the recording step by two multi-gap reproducing heads, each having  $(n + m)$  gaps, said "m" being an integer greater than or equal to 1.

11. (Currently Amended) A magnetic recording/reproducing method ~~for reproducing signals recorded by the magnetic recording method~~ according to claim 7, wherein further comprising the step of:

~~reproducing~~ said signals ~~are reproduced~~ recorded by the recording step by a multi-gap reproducing head having  $(2n + m)$  gaps, said "m" being an integer greater than or equal to 1.

12. (Currently Amended) A helical scan type magnetic recording/reproducing apparatus comprising:

a multi-gap recording head formed by laminating "n" recording heads and having "n" recording gaps, ~~wherein~~ said gaps are being pitched so as to record a pattern of tracks adjacent to one another; and

a gap for recording the last track among said "n" recording gaps of said multi-gap recording head ~~has a being wider recording gap~~ than other gaps to obtain a recorded pattern of narrow tracks,

wherein  $[[:]$ ,

said signals are reproduced by a multi-gap reproducing head having  $(2n + m)$  gaps, said multi-gap reproducing head formed by laminating  $(2n + m)$  reproducing heads, and said "n" being an integer greater than 2 and "m" being an integer greater than or equal to 1.

13. (Currently Amended) The magnetic recording/reproducing apparatus according to claim 12, ~~wherein~~ further comprising:

two multi-gap reproducing heads each having "n" reproducing gaps are arranged at an angle of  $180^\circ$  to each other on a rotary drum.

14. (Currently Amended) The magnetic recording/reproducing apparatus according to claim 12, ~~wherein further comprising:~~

a multi-gap reproducing head having " $2n$ " reproducing gaps is arranged at an angle of  $180^\circ$  to said multi-gap recording head.

15. (Currently Amended) A magnetic recording/reproducing apparatus capable of recording a pattern of " $n$ " tracks per rotation, ~~wherein comprising:~~

two multi-gap reproducing heads each having  $(n + m)$  reproducing gaps ~~are mounted,~~  
said multi-gap reproducing head formed by laminating  $(n + m)$  reproducing heads,  
wherein,

said " $n$ " being an integer greater than 2 and " $m$ " being an integer greater than or equal to  
1.

16. (Currently Amended) A magnetic recording/reproducing apparatus capable of recording a pattern of " $n$ " tracks per rotation, ~~wherein comprising:~~

a multi-gap reproducing head having  $(2n + m)$  reproducing gaps ~~is mounted,~~ said multi-  
gap reproducing head formed by laminating  $(2n+m)$  reproducing heads,  
wherein,

said " $n$ " being an integer greater than 2 and " $m$ " being an integer greater than or equal to  
1.